

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	100	address and database and gift and (id or identifier or identifiers or identification or pseudonym or pseudonyms) and (choice or preference or preferences) and (charge or fee or cost)	USPAT	2001/08/23 08:06
2	BRS	L2	69	1 and (confirm or confirms or confirmation)	USPAT	2001/08/23 08:24

*considered off
title*

*considered
all title*

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	3	address and database and gift and (id or identifier or identifiers or identification or pseudonym or pseudonyms)	EPO; JPO; DERWEN T	2001/08/23 08:32

considered all

	U	Document ID	Issue Date	Pages	Title
5	<input checked="" type="checkbox"/>	US 6253193 B1	20010626	319	Systems and methods for the secure transaction management and electronic rights protection
6	<input checked="" type="checkbox"/>	US 6249772 B1	20010619	33	Systems and methods wherein a buyer purchases a product at a first price and acquires the product from a merchant that offers the product for sale at a second price
24	<input checked="" type="checkbox"/>	US 6058373 A	20000502	41	System and method for processing electronic order forms
26	<input checked="" type="checkbox"/>	US 6055513 A	20000425	32	Methods and apparatus for intelligent selection of goods and services in telephonic and electronic commerce
27	<input checked="" type="checkbox"/>	US 6035280 A	20000307	28	Electronic discount couponing method and apparatus for generating an electronic list of coupons
31	<input checked="" type="checkbox"/>	US 5982891 A	19991109	315	Systems and methods for secure transaction management and electronic rights protection
34	<input checked="" type="checkbox"/>	US 5949876 A	19990907	318	Systems and methods for secure transaction management and electronic rights protection
35	<input checked="" type="checkbox"/>	US 5917912 A	19990629	319	System and methods for secure transaction management and electronic rights protection
36	<input checked="" type="checkbox"/>	US 5915019 A	19990622	317	Systems and methods for secure transaction management and electronic rights protection

	Current OR	Current XRef	Retrieval Classif	Inventor	S
5	705/57	705/52		Ginter, Karl L. , et al.	<input type="checkbox"/>
6	705/26			Walker, Jay S. , et al.	<input type="checkbox"/>
24	705/26	705/22 ; 705/27 ; 705/28		Blinn, Arnold , et al.	<input type="checkbox"/>
26	705/26	705/10 ; 705/14 ; 705/27		Katz, Ronald A. , et al.	<input type="checkbox"/>
27	705/14	186/52 ; 235/383 ; 705/1 ; 705/10		Christensen, Scott N.	<input type="checkbox"/>
31	705/54	705/26 ; 713/167		Ginter, Karl L. , et al.	<input type="checkbox"/>
34	705/80	705/1 ; 705/39 ; 705/54		Ginter, Karl L. , et al.	<input type="checkbox"/>
35	713/187	705/40 ; 709/312 ; 713/164		Ginter, Karl L. , et al.	<input type="checkbox"/>
36	705/54	705/26 ; 705/400 ; 713/200		Ginter, Karl L. , et al.	<input type="checkbox"/>

	U	Document ID	Issue Date	Pages	Title
37	<input checked="" type="checkbox"/>	US 5910987 A	19990608	311	Systems and methods for secure transaction management and electronic rights protection
38	<input checked="" type="checkbox"/>	US 5892900 A	19990406	359	Systems and methods for secure transaction management and electronic rights protection
39	<input type="checkbox"/>	US 5866888 A	19990202	38	Traveler security and luggage control system
52	<input checked="" type="checkbox"/>	US 5710886 A	19980120	26	Electric couponing method and apparatus
56	<input checked="" type="checkbox"/>	US 5663547 A	19970902	78	Method of fund-raising with a keyless contribution and gift commitment management device
59	<input type="checkbox"/>	US 5620182 A	19970415	42	Expected value payment method and system for reducing the expected per unit costs of paying and/or receiving a given amount of a commodity
60	<input type="checkbox"/>	US 5592378 A	19970107	88	Computerized order entry system and method
66	<input checked="" type="checkbox"/>	US 5269521 A	19931214	40	Expected value payment method and system for reducing the expected per unit costs of paying and/or receiving a given amount of a commodity

	Current OR	Current XRef	Retrieval Classif	Inventor	S
37	705/52	705/30		Ginter, Karl L. , et al.	<input type="checkbox"/>
38	713/200	713/201		Ginter, Karl L. , et al.	<input type="checkbox"/>
39	235/375	235/384 ; 235/462.13		Bravman, Richard , et al.	<input checked="" type="checkbox"/>
52	705/14	705/1		Christensen, Scott N. , et al.	<input type="checkbox"/>
56	235/380	235/375 ; 235/376 ; 235/379 ; 235/385 ; 235/472.02 ; 705/1 ; 902/4		Ziarno, Witold A.	<input type="checkbox"/>
59	273/138.2	463/16 ; 463/25 ; 705/14 ; 705/16		Rossides, Michael T.	<input checked="" type="checkbox"/>
60	705/27	705/28		Cameron, Paul S. , et al.	<input checked="" type="checkbox"/>
66	705/14	273/138.2 ; 273/460 ; 463/16 ; 463/22 ; 705/41 ; 902/23		Rossides, Michael T.	<input type="checkbox"/>



(10) Patent No.: US 6,253,193 B1
(45) Date of Patent: Jun. 26, 2001

- | | | |
|-----------|--------|------------------|
| 3,931,504 | 1/1976 | Jacoby . |
| 3,946,220 | 3/1976 | Brobeck et al. . |

(75) Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of MD (US); **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of CA (US)

62-241061	12/1984	(BE)
9 004 79	12/1984	(BE)
3803982A1	1/1990	(DE)

(73) Assignee: **InterTrust Technologies Corporation,**
Santa Clara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

David Arneke and Donna Cunningham, Document from the Internet: AT&T encryption system protects information services. (News Release), Jan. 9, 1995, 1 page.

(21) Appl. No.: 09/208,017

Primary Examiner—Gilberto Barrón, Jr.

(22) Filed: Dec. 9, 1998

(74) Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner L.L.P.

Related U.S. Application Data

(57) **ABSTRACT**

- (63) Continuation of application No. 08/964,333, filed on Nov. 4, 1997, now Pat. No. 5,982,891, which is a continuation of application No. 08/388,107, filed on Feb. 13, 1995, now abandoned.

- (51) Int. Cl.⁷ H04L 9/32
 (52) U.S. Cl. 705/57; 705/52
 (58) Field of Search 705/51, 52, 56,
 705/57; 380/201-203; 386/94, 124

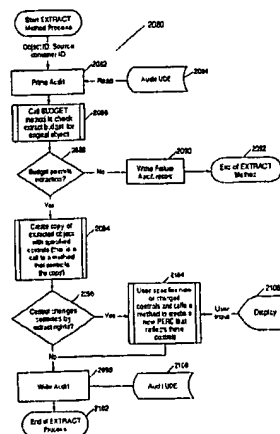
(56) **References Cited**

U.S. PATENT DOCUMENTS

- | | | |
|-----------|---------|----------------|
| 3,573,747 | 4/1971 | Adams et al. . |
| 3,609,697 | 9/1971 | Blevins . |
| 3,796,830 | 3/1974 | Smith . |
| 3,798,359 | 3/1974 | Feistel . |
| 3,798,360 | 3/1974 | Feistel . |
| 3,798,605 | 3/1974 | Feistel . |
| 3,806,882 | 4/1974 | Clarke . |
| 3,829,833 | 8/1974 | Freeny . |
| 3,906,448 | 9/1975 | Henriques . |
| 3,911,397 | 10/1975 | Freeny . |
| 3,924,065 | 12/1975 | Freeny . |

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

72 Claims, 146 Drawing Sheets





US006249772B1

(12) **United States Patent**
Walker et al.

(10) Patent No.: **US 6,249,772 B1**
(45) Date of Patent: **Jun. 19, 2001**

(54) **SYSTEMS AND METHODS WHEREIN A BUYER PURCHASES A PRODUCT AT A FIRST PRICE AND ACQUIRES THE PRODUCT FROM A MERCHANT THAT OFFERS THE PRODUCT FOR SALE AT A SECOND PRICE**

FOREIGN PATENT DOCUMENTS

2217739 10/1996 (CA).
779587 A2 6/1997 (EP).
779587 A3 6/1997 (EP).
10187820 7/1998 (JP).
WO 98/15907 4/1989 (WO).
WO 97/16797 5/1997 (WO).
WO 97/16897 5/1997 (WO).

(75) Inventors: **Jay S. Walker**, Ridgefield; **James A. Jorasch**, Stamford; **Andrew S. Van Luchene**, Norwalk, all of CT (US)

(List continued on next page.)

(73) Assignee: **Walker Digital, LLC**, Stamford, CT (US)

OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Kokusai Denshin Denwa Co Ltd, Communication charge billing system in telephone exchange . . . , 1999, Dialog file 351, Accession No. 012468380.*

Jane Bryant Quinn, "New Cars for Less", Newsweek, Oct. 23, 1978 the Columnists Section at p.80.

Judith Evans, "Who Was That Masked Cybershopper?; MasterCard-Visa Agreement on Credit Card Security May Make On-Line Commerce Fly", The Washington Post, Feb. 2, 1996, Friday Final Edition, Financial Section at p. F01.

(List continued on next page.)

(21) Appl. No.: **08/889,503**

(22) Filed: **Jul. 8, 1997**

(51) Int. Cl.⁷ **G06F 17/60**

(52) U.S. Cl. **705/26**

(58) Field of Search 705/25-27, 1,
705/14, 10; 340/825.26, 825.29, 825.33-825.35;
707/1, 10, 9, 100; 379/88.17

Primary Examiner—**Frantzy Poinvil**

(74) Attorney, Agent, or Firm—**Dean Alderucci; Patrick J. Buckley**

(56) **References Cited**

U.S. PATENT DOCUMENTS

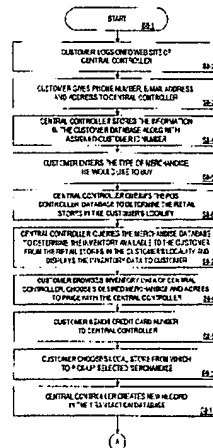
4,734,858 3/1988 Schlafly .
4,799,156 1/1989 Shavit et al. .
4,882,675 11/1989 Nichtberger et al. .
4,992,940 * 2/1991 Dworkin 705/26
5,010,485 4/1991 Bigari .
5,117,354 5/1992 Long et al. .
5,191,410 3/1993 McCalley et al. .
5,253,165 * 10/1993 Leiseca et al. 705/26
5,256,863 10/1993 Ferguson et al. .
5,294,078 3/1994 Naftzger .
5,294,080 3/1994 Johnson .
5,319,542 * 6/1994 King, Jr. et al. 705/27
5,434,394 7/1995 Roach et al. 235/375

(List continued on next page.)

(57) **ABSTRACT**

Systems and methods are provided wherein a buyer purchases a product at a first price and acquires the product from a merchant that offers the product for sale at a second price, the second price being different from the first price. Transaction information associated with the buyer and the merchant is received. Information that allows the buyer to acquire the product from the merchant in exchange for providing payment of an amount based on the first price, such as by providing payment to a central controller, is transmitted. According to one embodiment, the central controller provides payment of an amount based on the second price to the merchant.

132 Claims, 15 Drawing Sheets





US006058373A

United States Patent [19][11] **Patent Number:** **6,058,373****Blinn et al.**[45] **Date of Patent:** **May 2, 2000****[54] SYSTEM AND METHOD FOR PROCESSING ELECTRONIC ORDER FORMS**

[75] Inventors: **Arnold Blinn**, Bellevue, Wash.;
Michael Ari Cohen, San Francisco,
 Calif.; **Michael Lorton**; **Gregory J.**
Stein, both of Redmond, Wash.

[73] Assignee: **Microsoft Corporation**, Redmond,
 Wash.

[21] Appl. No.: **08/732,205**

[22] Filed: **Oct. 16, 1996**

[51] Int. Cl.⁷ **G08B 9/00**

[52] U.S. Cl. **705/26; 705/22; 705/27;**
705/28

[58] Field of Search **705/20, 22, 26,**
705/27, 28, 29

[56] References Cited**U.S. PATENT DOCUMENTS**

4,799,156	1/1989	Shavit et al. .	
5,347,632	9/1994	Filepp et al. .	
5,710,887	1/1998	Chelliah et al.	395/226

OTHER PUBLICATIONS

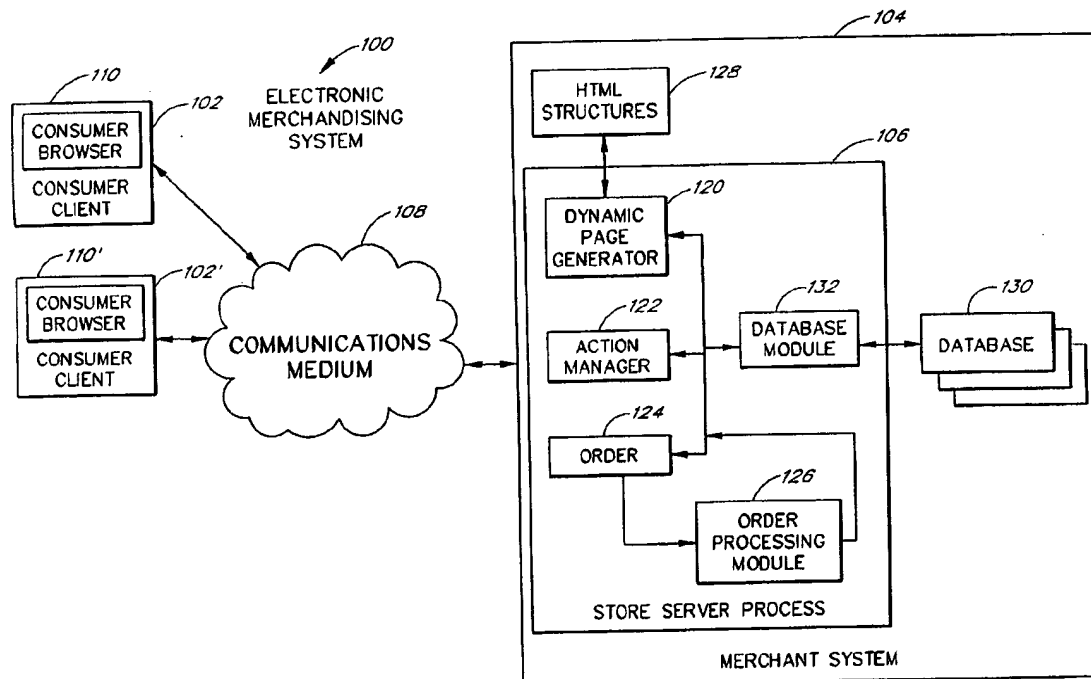
General overview and description of eShop Technology, Internet address: <http://www.eshop.com/corp/technology.html>. This reference was copied from the Internet and printed around May 1996, although the pages are dated Jan. 1, 1996.

A compilation of press releases of various dates describing features of eShop Technology, Internet address: <http://www.eshop.com/corp/press.html>. This reference was copied from the Internet and printed around May 1996, although the pages are dated Jan. 1, 1996. Also note dates listed for press releases of Nov. 7, 1995, Dec. 7, 1995 and Jan. 23, 1996. *eShop™ Technology Merchant Manual*, Feb. 21, 1996. This document contains proprietary material subject to M.P.E.P. § 724.

Primary Examiner—Thomas R. Peeso
Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] ABSTRACT

The present invention provides a method and system for processing electronic sales transactions. In a preferred embodiment, an electronic merchandising system allows merchants to create electronic orders which are easily adaptable for different sales situations. The preferred electronic order comprises flexible blackboards which allow merchants to add sales information with what are called key-value pairs. In the preferred embodiment, the order is an object which contains at least one order blackboard and one or more item blackboards. In addition, the preferred embodiment contains an order processing module with multiple stages which process the order. The preferred stages include a product information stage, a merchant information stage, a shopper information stage, an order initialization stage, an order check stage, an item price adjust stage, an order price adjust stage, a shipping stage, a handling stage, a tax stage, an order total stage, an inventory stage, a payment stage and an accept stage.

58 Claims, 18 Drawing Sheets



US006055513A

United States Patent [19][11] **Patent Number:** **6,055,513****Katz et al.**[45] **Date of Patent:** **Apr. 25, 2000**

[54] **METHODS AND APPARATUS FOR INTELLIGENT SELECTION OF GOODS AND SERVICES IN TELEPHONIC AND ELECTRONIC COMMERCE**

[75] Inventors: **Ronald A. Katz**, Los Angeles, Calif.;
Gary L. West; **Thomas B. Barker**,
both of Omaha, Nebr.

[73] Assignee: **Telebuyer, LLC**, Los Angeles, Calif.

[21] Appl. No.: **09/038,399**

[22] Filed: **Mar. 11, 1998**

[51] Int. Cl.⁷ **G06F 17/60**

[52] U.S. Cl. **705/26; 705/27; 705/10;**
705/14

[58] Field of Search **705/10, 1, 26,**
705/27, 14

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,792,968	12/1988	Katz	379/92.03
4,799,156	1/1989	Shavit et al.	705/26
4,825,045	4/1989	Humble	235/383

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

WO94/21084	9/1994	WIPO	H04N 7/14
WO97/21183	6/1997	WIPO	G06F 151/00
WO 98/34189	8/1998	WIPO	G06F 17/60
WO 98/53406	11/1998	WIPO	G06F 15/163
WO98/58334	12/1998	WIPO	G06F 17/60
WO99/06914	2/1999	WIPO	G06F 13/00
WO99/13424	3/1999	WIPO	G06F 17/60

OTHER PUBLICATIONS

Middleton, T., "IT Stars in Video Chain's Rollout, Blockbuster Integrates Customer Data on Multiple Platforms", Jan. 30, 1995.

Peppers et al., "The One to One Future Building Relationships One Customer at a Time", © 1993, 1996, pp. 3-17; 40-43.

Alta Vista Alters its Vision of the Market, Abstract from Wall Street Journal (1996).

Amazon.com Website Printout dated Feb. 22, 1998.

Amazon.com Website Printout dated Feb. 24, 1998.

Amazon.com Website Printout dated Jul. 8, 1998.

Angiolillo, J. et al., "Personal Visual Communications Enters the Marketplace", AT&T Technology Products, Systems and Services, vol. 7, No. 3, pp 18-28, Fall, 1992.

Arbor Software Website Printouts dated Jun. 30, 1998.

(List continued on next page.)

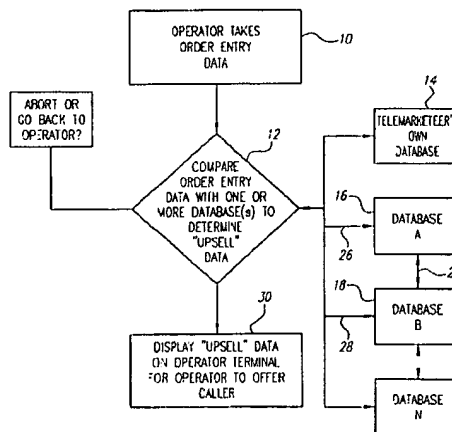
Primary Examiner—Emanuel Todd Voeltz

Assistant Examiner—George D. Morgan

Attorney, Agent, or Firm—Lyon & Lyon LLP

[57] **ABSTRACT**

Apparatus and methods are provided for effecting remote commerce, such as in telemarketing (either inbound or outbound) and in electronic commerce, which are particularly adapted for the intelligent selection and proffer of products, services or information to a user or customer. In one aspect of the invention, goods, service or information are provided to the user via electronic communication, such as through a telephone, videophone or other computer link, as determined by the steps of first, establishing communication via the electronic communications device between the user and the system to effect a primary transaction or primary interaction, second, obtaining data with respect to the primary transaction or primary interaction, including at least in part a determination of the identity of the user or prospective customer, third, obtaining at least a second data element relating to the user, fourth, utilizing the primary transaction or primary interaction data along with the at least second data element as factors in determining at least one good, service or item of information for prospective upsell to the user or prospective customer, and offering the item to the prospective customer. In the preferred embodiment, the selection of the proffer of goods, services or information comprises an upsell with respect to the primary transaction or primary interaction data. The offer of the upsell is preferably generated and offered in real time, that is, during the course of the communication initiated with the primary transaction or primary interaction.

267 Claims, 9 Drawing Sheets



US006035280A

United States Patent [19]

Christensen

[11] Patent Number: 6,035,280
[45] Date of Patent: *Mar. 7, 2000

[54] **ELECTRONIC DISCOUNT COUPONING METHOD AND APPARATUS FOR GENERATING AN ELECTRONIC LIST OF COUPONS**

[76] Inventor: **Scott N. Christensen**, 15606 Holmes Cir., Omaha, Nebr. 68135

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: 08/630,330

[22] Filed: Apr. 10, 1996

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/491,367, Jun. 16, 1995, Pat. No. 5,710,886.

[51] Int. Cl.⁷ G06F 15/00; G06F 15/21; G06F 15/22; G06F 15/24

[52] U.S. Cl. 705/14; 705/10; 705/1; 364/401; 364/402; 364/479; 186/52; 235/383

[58] Field of Search 705/14; 186/52; 235/383; 364/401, 402, 479

References Cited

U.S. PATENT DOCUMENTS

Re. 34,915	4/1995	Nichtberger et al.	705/14
4,554,446	11/1985	Murphy et al.	235/385 X
4,674,041	6/1987	Lemon et al.	705/14
4,723,212	2/1988	Mindrum et al.	705/14
4,908,761	3/1990	Tai	705/14
5,128,752	7/1992	Von Kohorn	705/10
5,305,195	4/1994	Murphy	705/1
5,305,197	4/1994	Axler et al.	705/14
5,353,218	10/1994	De Lapa et al.	705/14
5,368,129	11/1994	Von Kohorn	705/14 X
5,502,636	3/1996	Clarke	705/14 X

5,710,886 1/1998 Christensen et al. 705/14

Primary Examiner—Allen R. MacDonald

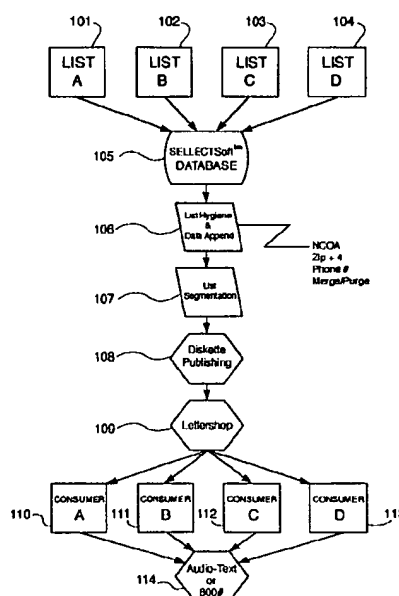
Assistant Examiner—Pedro R. Kanof

Attorney, Agent, or Firm—Robert Platt Bell & Associates, P.C.

[57] ABSTRACT

A method and apparatus for distributing, generating, and redeeming discount Virtual Coupons™, rebate or gift certificates or the like which may be used on conjunction with a frequency card program or the like. Virtual Coupons™ may be distributed electronically, for example, in the form of a diskette or CD-ROM software. Software on the diskette or CD-ROM may prompt a consumer to call a 1-800 number for a validation number or code. During the phone call, telemarketing personnel may request consumer demographic and or identification information which may be entered into a centralized database. Once the software is validated, a consumer may print out a list selected Virtual Coupons™ displayed on a Graphical User Interface (GUI). When a product is purchased, the UPC code of the product may be compared electronically with a list of Virtual Coupons™ authorized for a particular consumer. An appropriate coupon discount may then be applied and the Virtual Coupon™ may be considered "redeemed". Once redeemed, consumer ID information and Virtual Coupon™ information may be retrieved electronically and used to update a central database. Accurate data may then be produced illustrating which consumers or groups of consumers are redeeming which Virtual Coupons™. Such data may be used for marketing purposes or to generated further diskettes for distribution targeting specific consumers or groups of consumers with specific classes of Virtual Coupon™ offerings. The use of Virtual Coupons™ eliminates or reduces fraud, and allows a frequency card discount to be applied only a limited number of times.

20 Claims, 14 Drawing Sheets





US005982891A

United States Patent [19]

Ginter et al.

[11] Patent Number: 5,982,891
[45] Date of Patent: Nov. 9, 1999

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: Karl L. Ginter, Beltsville; Victor H. Shear, Bethesda, both of Md.; Francis J. Spahn, El Cerrito; David M. Van Wle, Sunnyvale, both of Calif.

[73] Assignee: InterTrust Technologies Corp., Sunnyvale, Calif.

[21] Appl. No.: 08/964,333

[22] Filed: Nov. 4, 1997

Related U.S. Application Data

[63] Continuation of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ H04L 9/30

[52] U.S. Cl. 380/4; 380/24; 380/25; 705/26

[58] Field of Search 380/4, 25; 396/683; 705/26; 300/24

[56] References Cited

U.S. PATENT DOCUMENTS

3,573,747 4/1971 Adams et al. .
3,609,697 9/1971 Blevins .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

9 004 79 12/1984 Belgium .
0 84 441 7/1983 European Pat. Off. .
0128672 12/1984 European Pat. Off. .
A0135422 3/1985 European Pat. Off. .
0399822A2 11/1990 European Pat. Off. .
0421409A2 4/1991 European Pat. Off. .
0 456 386 A2 11/1991 European Pat. Off. .
0 469 864 A2 2/1992 European Pat. Off. .
0 469 864 A3 2/1992 European Pat. Off. .

(List continued on next page.)

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, "Multimedia Mixed Object Envelopes Supporting a Graduated Fee Scheme via Encryption," vol. 37, No. 03, Mar. 1994, Armonk, NY.

IBM Technical Disclosure Bulletin, "Transformer Rules for Software Distribution Mechanism-Support Products," vol. 37, No. 04B, Apr. 1994, Armonk, NY.

Suida, Karl, *Mapping New Applications Onto New Technologies*, "Security Services in Telecommunications Networks," Mar. 8-10, 1988, Zurich.

Portland Software's ZipLock, Internet information, Copyright Portland Software 1996-1997, 12 pages.

Stefik, "Internet Dreams: Archetypes, Myths, and Metaphors, Letting Loose the Light: Igniting Commerce in Electronic Publication," pp. 219-253, (1996) Massachusetts Institute of Technology.

(List continued on next page.)

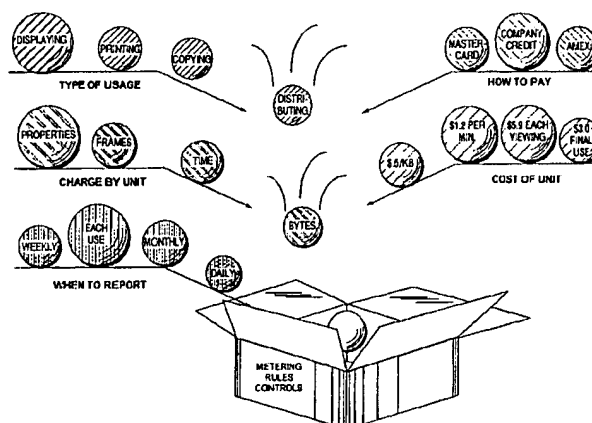
Primary Examiner—Gilberto Barron, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

102 Claims, 146 Drawing Sheets





US005949876A

United States Patent [19]

Ginter et al.

[11] Patent Number: **5,949,876**
 [45] Date of Patent: ***Sep. 7, 1999**

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

[73] Assignee: **InterTrust Technologies Corporation**, Sunnyvale, Calif.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/778,256**

[22] Filed: **Jan. 8, 1997**

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/32**

[52] U.S. Cl. **380/4; 380/24; 705/39**

[58] Field of Search **395/237, 241; 380/4, 16, 49, 24; 705/39**

[56] References Cited

U.S. PATENT DOCUMENTS

4,309,569 1/1982 Merkle .
 4,337,483 6/1982 Guillou .
 4,465,901 8/1984 Best .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0128672 12/1984 European Pat. Off. .
 0180460 5/1986 European Pat. Off. .
 0 370 146 11/1988 European Pat. Off. .

(List continued on next page.)

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, "Multimedia Mixed Object Envelopes Supporting a Graduated Fee Scheme via Encryption," vol. 37, No. 03, Mar. 1994, Armonk, NY.

IBM Technical Disclosure Bulletin, "Transformer Rules for Software Distribution Mechanism-Support Products," vol. 37, No. 04B, Apr. 1994, Armonk, NY.

Suida, Karl, *Mapping New Applications onto New Technologies*, "Security Services in Telecommunications Networks," Mar. 8-10, 1988, Zurich.

Applications Requirements for Innovative Video Programming; How to Foster (or Cripple) Program Development Opportunities for Interactive Video Programs Delivered on Optical Media; A Challenge for the Introduction of DVD (Digital Video Disc) (Oct. 19-20, 1995, Sheraton Universal Hotel, Universal City CA).

(List continued on next page.)

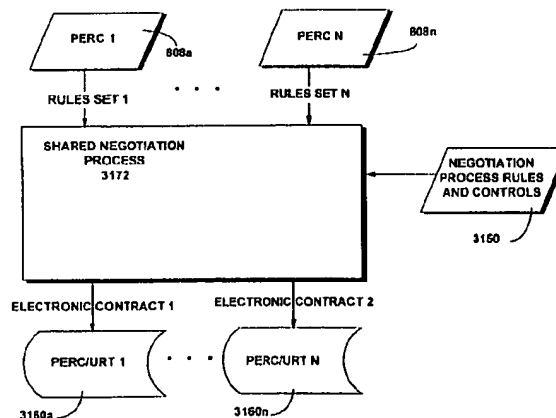
Primary Examiner—Gilberto Barrón, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

375 Claims, 146 Drawing Sheets





US005917912A

United States Patent [19]
Ginter et al.

[11] **Patent Number:** **5,917,912**
 [45] **Date of Patent:** **Jun. 29, 1999**

[54] **SYSTEM AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

[75] **Inventors:** **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

[73] **Assignee:** **InterTrust Technologies Corporation**, Sunnyvale, Calif.

[21] **Appl. No.:** **08/780,545**

[22] **Filed:** **Jan. 8, 1997**

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] **Int. Cl.⁶** **G06F 17/60**

[52] **U.S. Cl.** **380/24; 380/4; 395/683; 705/40**

[58] **Field of Search** **380/4, 25; 395/186, 395/683, 684**

[56] References Cited

U.S. PATENT DOCUMENTS

3,573,747	4/1971	Adams et al. .
3,609,697	9/1971	Blevins .
3,796,830	3/1974	Smith .
3,798,359	3/1974	Feistel .
3,798,360	3/1974	Feistel .
3,798,605	3/1974	Feistel .
3,806,882	4/1974	Clarke .
3,829,833	8/1974	Freeny, Jr. .
3,906,448	9/1975	Henriques .
3,911,397	10/1975	Freeny, Jr. .
3,924,065	12/1975	Freeny, Jr. .
3,931,504	1/1976	Jacoby .
3,946,220	3/1976	Brobeck et al. .
3,956,615	5/1976	Anderson et al. .
3,958,081	5/1976	Ehram et al. .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

9 004 79	12/1984	Belgium .
0 84 441	7/1983	European Pat. Off. .
0128672	12/1984	European Pat. Off. .
A0135422	3/1985	European Pat. Off. .

(List continued on next page.)

OTHER PUBLICATIONS

Applications Requirements for Innovative Video Programming: How to Foster (or Cripple) Program Development Opportunities for Interactive Video Programs Delivered on Optical Media; A Challenge for the Introduction of DVD (Digital Video Disc) (Oct. 19-20, 1995, Sheraton Universal Hotel, Universal City CA).

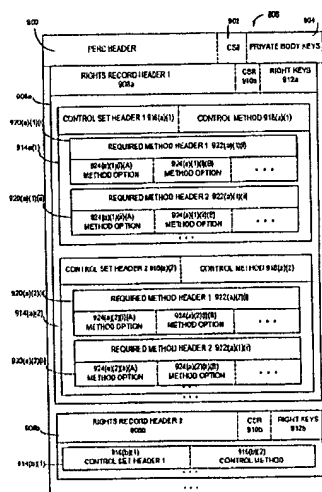
(List continued on next page.)

Primary Examiner—Gilberto Barrón, Jr.
Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

58 Claims, 146 Drawing Sheets





US005915019A

United States Patent [19]

Ginter et al.

[11] Patent Number: 5,915,019
[45] Date of Patent: Jun. 22, 1999

[54] SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION

[75] Inventors: Karl L. Ginter, Beltsville; Victor H. Shear, Bethesda, both of Md.; Francis J. Spahn, El Cerrito; David M. Van Wle, Sunnyvale, both of Calif.

[73] Assignee: InterTrust Technologies Corp., Sunnyvale, Calif.

[21] Appl. No.: 08/780,393

[22] Filed: Jan. 8, 1997

Related U.S. Application Data

[62] Division of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ H04L 9/00

[52] U.S. Cl. 380/4; 380/21; 380/49; 395/680; 705/26; 705/400

[58] Field of Search 380/3, 4, 5, 21, 380/49; 395/680, 683; 705/26, 400

[56] References Cited

U.S. PATENT DOCUMENTS

3,573,747 4/1971 Adams et al. .
3,609,697 9/1971 Blevins .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

9 004 79 12/1984 Belgium .
0 84 441 7/1983 European Pat. Off. .
0128672 12/1984 European Pat. Off. .
A0135422 3/1985 European Pat. Off. .
0180460 5/1986 European Pat. Off. .
0 370 146 11/1988 European Pat. Off. .
0399822A2 11/1990 European Pat. Off. .
0421409A2 4/1991 European Pat. Off. .
0 456 386 A2 11/1991 European Pat. Off. .

(List continued on next page.)

OTHER PUBLICATIONS

Applications Requirements for Innovative Video Programming; How to Foster (or Cripple) Program Development Opportunities for Interactive Video Programs Delivered on Optical Media; A Challenge for the Introduction of DVD (Digital Video Disc) (Oct. 19-20, 1995, Sheraton Universal Hotel, Universal City CA).

Arneke, David, et al., News Release, AT&T, Jan. 9, 1995, AT&T encryption system protects information services, 1 page.

AT&T Technology, vol. 9, No. 4, New Products, Systems and Services, pp. 16-19, Undated.

Barassi, Theodore Sedgwick, Esq., The Cybernotary: Public Key Registration and Certification and Authentication of International Legal Transactions, 4 pages, Undated.

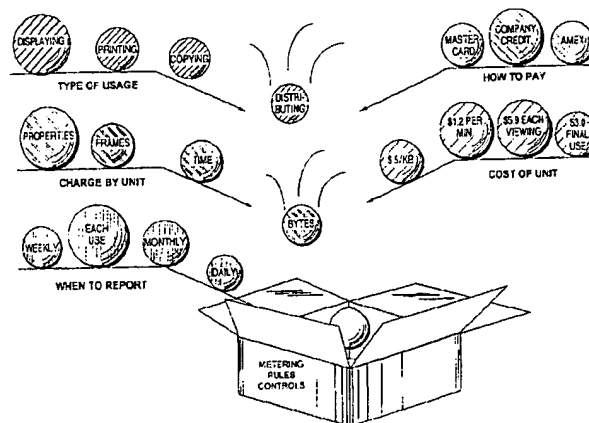
Primary Examiner—Gilberto Barrón, Jr.

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

101 Claims, 146 Drawing Sheets





US005910987A

United States Patent [19]

Ginter et al.

[11] Patent Number: **5,910,987**
 [45] Date of Patent: **Jun. 8, 1999**

[54] **SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

0128672 12/1984 European Pat. Off. .
 0135422 3/1985 European Pat. Off. .
 0180460 5/1986 European Pat. Off. .

(List continued on next page.)

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **Francis J. Spahn**, El Cerrito; **David M. Van Wle**, Sunnyvale, both of Calif.

OTHER PUBLICATIONS

Applications Requirements for Innovative Video Programming; How to Foster (or Cripple) Program Development Opportunities for Interactive Video Programs Delivered on Optical Media; A Challenge for the Introduction of DVD (Digital Video Disc) (Oct. 19-20, 1995, Sheraton Universal Hotel, Universal City CA).

Arneke, David, et al., News Release, AT&T, Jan. 9, 1995, AT&T encryption system protects information services, 1 page.

[73] Assignee: **InterTrust Technologies Corp.**, Sunnyvale, Calif.

[21] Appl. No.: **08/760,440**

[22] Filed: **Dec. 4, 1996**

Related U.S. Application Data

[63] Continuation of application No. 08/388,107, Feb. 13, 1995, abandoned.

[51] Int. Cl.⁶ **H04L 9/32; G06F 17/60**

[52] U.S. Cl. **380/24; 380/4**

[58] Field of Search **380/4, 25, 24; 395/683, 684; 705/26**

(List continued on next page.)

Primary Examiner—Gilberto Barron, Jr.
Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57]

ABSTRACT

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

References Cited

U.S. PATENT DOCUMENTS

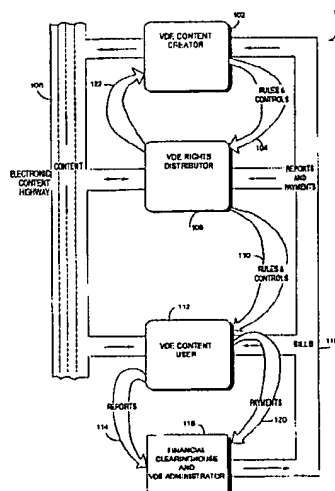
3,573,747 4/1971 Adams et al. .
 3,609,697 9/1971 Blevins .
 3,796,830 3/1974 Smith .
 3,798,359 3/1974 Feistel .
 3,798,360 3/1974 Feistel .
 3,798,605 3/1974 Feistel .
 3,806,882 4/1974 Clarke .
 3,829,833 8/1974 Freeny, Jr. .
 3,906,448 9/1975 Henriques .
 3,911,397 10/1975 Freeny, Jr. .
 3,924,065 12/1975 Freeny, Jr. .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

9 004 79 12/1984 Belgium .
 0 84 441 7/1983 European Pat. Off. .

2 Claims, 146 Drawing Sheets





US005892900A

United States Patent [19]

Ginter et al.

[11] **Patent Number:** 5,892,900[45] **Date of Patent:** Apr. 6, 1999[54] **SYSTEMS AND METHODS FOR SECURE TRANSACTION MANAGEMENT AND ELECTRONIC RIGHTS PROTECTION**

[75] Inventors: **Karl L. Ginter**, Beltsville; **Victor H. Shear**, Bethesda, both of Md.; **W. Olin Sibert**, Lexington, Mass.; **Francis J. Spahn**, El Cerrito; **David M. Van Wie**, Sunnyvale, both of Calif.

[73] Assignee: **InterTrust Technologies Corp.**, Sunnyvale, Calif.

[21] Appl. No.: **706,206**

[22] Filed: **Aug. 30, 1996**

[51] Int. Cl.⁶ **G06F 11/00**

[52] U.S. Cl. **395/186; 395/184.01**

[58] Field of Search **395/186, 187.01, 395/188.01, 218, 200.59; 380/4, 25, 30, 825.31, 825.34**

[56] **References Cited****U.S. PATENT DOCUMENTS**

3,573,747 4/1971 Adams et al. 73/862.58
3,609,697 9/1971 Blevins 395/407

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

9 004 79 12/1984 Belgium .
0 84 441 7/1983 European Pat. Off. .
0128672 12/1984 European Pat. Off. .
A0135422 3/1985 European Pat. Off. .
0180460 5/1986 European Pat. Off. .
0 370 146 11/1988 European Pat. Off. .
0399822A2 11/1990 European Pat. Off. .
0421409A2 4/1991 European Pat. Off. .
0 456 386 A2 11/1991 European Pat. Off. .
0 469 864 A2 2/1992 European Pat. Off. .
0 469 864 A3 2/1992 European Pat. Off. .
0 565 314 A2 10/1993 European Pat. Off. .
0 593 305 A2 4/1994 European Pat. Off. .
0 651 554 A1 5/1995 European Pat. Off. .

(List continued on next page.)

OTHER PUBLICATIONS

Applications Requirements for Innovative Video Programming; How to Foster (or Cripple) Program Development Opportunities for Interactive Video Programs Delivered on Optical Media; A Challenge for the Introduction of DVD (Digital Video Disc) (19-20 Oct. 1995, Sheraton Universal Hotel, Universal City CA).

Bruner, Rick E., PowerAgent, NetBot help advertisers reach Internet shoppers, Aug. 1997 (Document from Internet).

CD ROM, Introducing . . . The Workflow CD-ROM Sampler, Creative Networks, MCIMail: Creative Networks, Inc., Palo Alto, California.

(List continued on next page.)

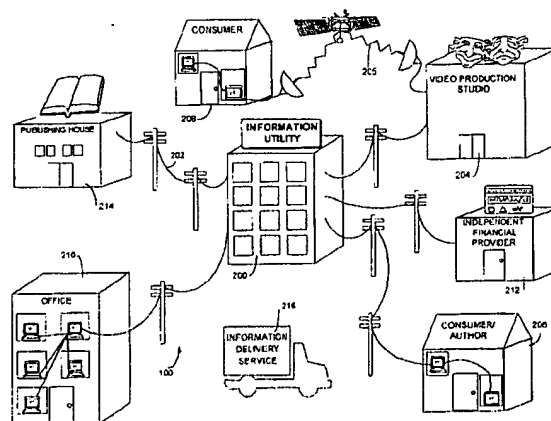
Primary Examiner—Robert W. Beausoliel, Jr.

Assistant Examiner—Pierre F. Elisca

Attorney, Agent, or Firm—Nixon & Vanderhye P.C.

[57] **ABSTRACT**

The present invention provides systems and methods for electronic commerce including secure transaction management and electronic rights protection. Electronic appliances such as computers employed in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Secure subsystems used with such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Secure distributed and other operating system environments and architectures, employing, for example, secure semiconductor processing arrangements that may establish secure, protected environments at each node. These techniques may be used to support an end-to-end electronic information distribution capability that may be used, for example, utilizing the "electronic highway."

220 Claims, 163 Drawing Sheets



US005866888A

United States Patent [19][11] **Patent Number:** **5,866,888****Bravman et al.**[45] **Date of Patent:** **Feb. 2, 1999****[54] TRAVELER SECURITY AND LUGGAGE CONTROL SYSTEM**

[75] Inventors: **Richard Bravman**, Smithtown; **Ynjun P. Wang**, Stony Brook, both of N.Y.; **D. C. Toedt, III**; **Stefan G. Vingsbo**, both of Houston, Tex.

[73] Assignee: **Symbol Technologies, Inc.**, Holtsville, N.Y.

[21] Appl. No.: **411,289**

[22] Filed: **Mar. 27, 1995**

Related U.S. Application Data

[60] Division of Ser. No. 923,771, Aug. 3, 1992, Pat. No. 5,401,944, which is a continuation-in-part of Ser. No. 642,775, Jan. 18, 1991, Pat. No. 5,159,635, and a continuation-in-part of Ser. No. 616,026, Nov. 20, 1990, abandoned.

[51] Int. Cl.⁶ **G06F 17/00**

[52] U.S. Cl. **235/375; 235/462; 235/384**

[58] Field of Search **235/379, 382, 235/384, 375, 462; 902/3, 4, 5**

[56] References Cited**U.S. PATENT DOCUMENTS**

3,752,312 8/1973 Soltanoff 209/3.3

4,065,343	12/1977	Stumpe	235/462 X
4,634,849	1/1987	Klingen	235/487
4,647,917	3/1987	Anderson, III et al.	340/572
4,707,592	11/1987	Ware	235/379
4,775,246	10/1988	Edelmann et al.	380/23
5,051,565	9/1991	Wolfram	235/384
5,163,098	11/1992	Dahbura	380/24
5,243,655	9/1993	Wang	235/462 X

Primary Examiner—Anita Pellman Gross

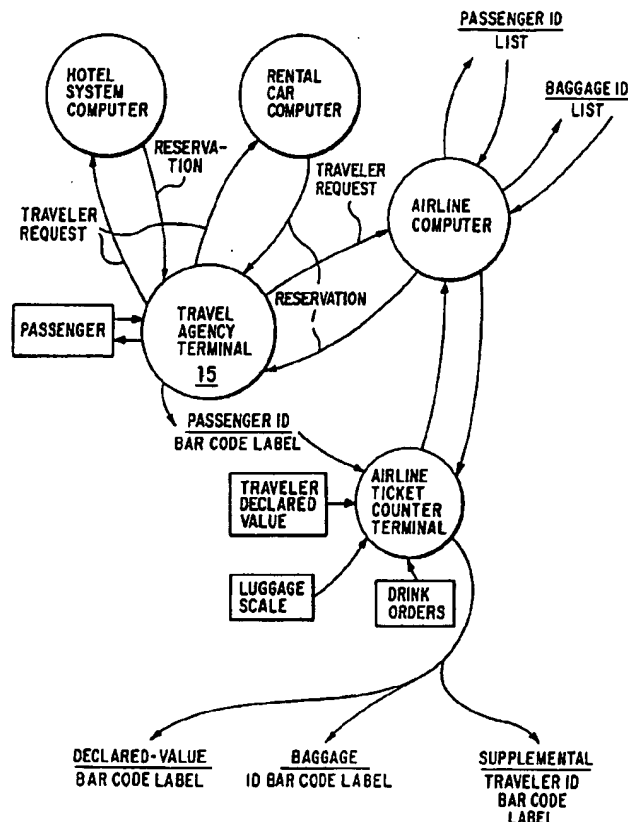
Assistant Examiner—Michael G. Lee

Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

[57] ABSTRACT

A two-dimensional bar code is used to identify a traveler's luggage, permitting the luggage to be tracked and, if desired, to be delivered to the traveler's ultimate destination (e.g., a hotel). If the traveler is traveling on an airline, a corresponding two-dimensional bar code is applied to the traveler's boarding pass. A two-dimensional bar code reader is used to read the boarding-pass bar code of each enplaning passenger; comparison of these bar codes with luggage bar-code data permits an alarm to be raised if each item of checked luggage is not matched by an enplaned passenger. The boarding-pass bar code may take the form of an integrated passenger identification code for use by, e.g., rental car companies, hotels, and the like.

20 Claims, 23 Drawing Sheets





US005710886A

United States Patent [19]

Christensen et al.

[11] Patent Number: 5,710,886
[45] Date of Patent: Jan. 20, 1998

[54] ELECTRIC COUPONING METHOD AND APPARATUS

[75] Inventors: Scott N. Christensen, Omaha, Nebr.;
David D. Ingwersen, Scottsdale, Ariz.

[73] Assignee: SelectSoft, L.C., Phoenix, Ariz.

[21] Appl. No.: 491,367

[22] Filed: Jun. 16, 1995

[51] Int. Cl.⁶ G06F 151/00

[52] U.S. Cl. 395/214; 395/201

[58] Field of Search 395/201, 214;
366/479.07; 235/381, 385; 186/52, 55-56

[56] References Cited

U.S. PATENT DOCUMENTS

5,128,752	7/1992	Von Kohorn	358/84
5,305,195	4/1994	Murphy	364/401
5,305,197	4/1994	Axler et al.	364/401
5,353,218	10/1994	DeLapa et al.	364/401
5,502,636	3/1996	Clarke	395/214

OTHER PUBLICATIONS

"U.P.C. Coupon Code Guidelines Manual," Uniform Code Council, Inc. 8163 Old Yankee Road, Suite J, Dayton, OH 45458, pp. 1:30-39, Sep. 1994.

Advertisement: "Online Coupon Delivery" *New York Times*, Business Section, Jun. 21, 1995.

Brochure: "Coupons Online" A Division of Interactive Database Marketing Company. 271 Madison Avenue, Suite 1005, New York, NY 10016.

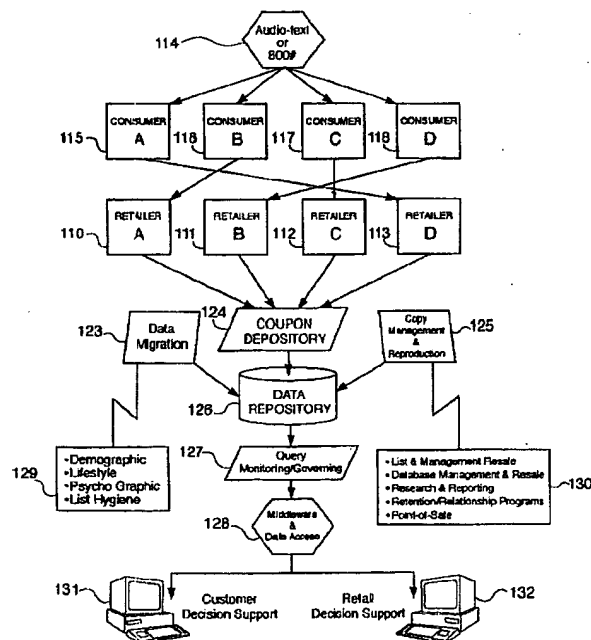
Fawcett, Adrienne Ward "Trading Scissors for Modems", *Advertising Age*, Jun. 6, 1995.

Primary Examiner—Gail O. Hayes
Assistant Examiner—Frantzy Poinvil
Attorney, Agent, or Firm—Robert Platt Bell & Associates, P.C.

[57] ABSTRACT

A method and apparatus for distributing, generating, and redeeming discount coupons, rebate or gift certificates or the like tracks each coupon using a consumer ID number printed on the coupon. Coupons may be distributed electronically, for example, in the form of a diskette or CD-ROM software. Software on the diskette or CD-ROM may prompt a consumer to call a 1-800 number for a validation number or code. During the phone call, telemarketing personnel may request consumer demographic and or identification information which may be entered into a centralized database. Once the software is validated, a consumer may print out selected coupons displayed on a Graphical User Interface (GUI). Each coupon may be printed only a limited number of times. Each coupon may be imprinted with a consumer ID number, preferably in the form of a bar code. Once redeemed, consumer ID information and coupon information may be retrieved from coupons forwarded to a coupon clearing house. Accurate data may then be produced illustrating which consumers or groups of consumers are redeeming which coupons. Such data may be used for marketing purposes or to generated further diskettes for distribution targeting specific consumers or groups of consumers with specific classes of coupon offerings. The use of a consumer ID number on the coupon may reduce or prevent the fraudulent copying and redemption of coupons, as multiple redemptions of a single coupon by a consumer may be readily detected from data gathered at the brokerage clearing house.

19 Claims, 14 Drawing Sheets





US005663547A

United States Patent [19]
Ziarno

[11] **Patent Number:** **5,663,547**
 [45] **Date of Patent:** **Sep. 2, 1997**

[54] **METHOD OF FUND-RAISING WITH A
 KEYLESS CONTRIBUTION AND GIFT
 COMMITMENT MANAGEMENT DEVICE**

[76] **Inventor:** Witold A. Ziarno, 4519 S. St. Louis
 Ave., Chicago, Ill. 60632

[21] **Appl. No.:** 505,610

[22] **Filed:** Jul. 24, 1995

Related U.S. Application Data

[63] **Continuation-in-part of Ser. No. 318,914, filed as PCT/
 US94/09915, Sep. 6, 1994.**

[51] **Int. Cl.⁶** G06K 5/00

[52] **U.S. Cl.** 235/380; 235/379; 235/385;
 235/472; 902/4; 705/1

[58] **Field of Search** 235/380, 379,
 235/385, 472; 902/4, 22; 364/401, 402,
 406, 408

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,454,414	6/1984	Benton	235/379
5,055,660	10/1991	Bertagna et al.	235/472
5,089,690	2/1992	Okamura	235/145 R
5,206,488	4/1993	Teicher	235/380
5,221,838	6/1993	Gutman et al.	235/379
5,294,782	3/1994	Kumar	235/462
5,359,658	10/1994	Goodson	379/447
5,466,919	11/1995	Hovakimian	235/380
5,475,585	12/1995	Bush	364/401
5,546,303	8/1996	Helbling	364/401

Primary Examiner—Donald T. Hajec

Assistant Examiner—Michael G. Lee

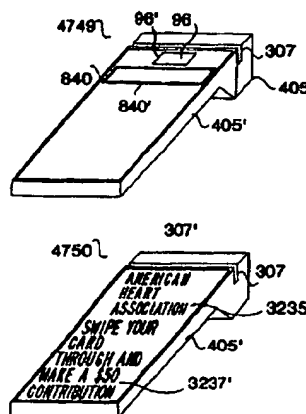
Attorney, Agent, or Firm—Witold A. Ziarno

[57] **ABSTRACT**

A method of and device for streamlining, simplifying and inducing the giving of contribution or gift commitments by contributors or prospective gift givers [, and receiving thereof upon receipt that] involves dispersing through a crowd of prospective contributors or gift givers a plurality of keyless, electronic contributions or gifts management

devices for immediate entry of consecutive data comprising the identities of the contributors or gift givers making the monetary contribution commitments or monetary gift commitments, and device therefor. Optionally, the method and mode of operation of the device involves a plurality of gift recipients of the monetary contribution or monetary gift commitments, and further includes the step of supplanting a gift recipient or fund-raising organization with another gift recipient or fund-raising organization to which contribution or gift commitments are made. The method and mode of operation of the device has the advantage that the entry of gifts or contribution commitments to a plurality of the gift recipients or fund-raising organizations is simplified. [Optionally, the method and the mode of operation of device includes the step of correlating a numerical amount to the successive contributors' or gift givers' data to obtain contribution or gift data sets, and in which the step of dispersing is selected from the group consisting of spreading, distributing, migrating, advancing, disseminating, and diffusing the devices. The method and mode of operation of the device further includes the steps of communicating the data for a plurality of contribution or gift commitments in a substantially continuous stream to a remote device for immediate recordation thereof on the remote device. Optionally, the method or mode of operation of the devices involves a plurality of consecutive contribution or gift commitments entered on the devices unimpeded by verification of authorization whereby the throughput of contribution or gift commitments entered on the devices is enhanced. In yet another variant of the method or mode of operation of the device involves a first group of contributors or gift givers making gift or contribution commitments on the devices that are correlated to a numerical contribution or gift amount and in other contributors or gift givers making gift or contribution commitments correlated to mutable contribution numerical amounts. The numerical amount is selected from the group of a pre-programmed numerical amount, a prearranged numerical amount, a fixed numerical amount, a variable numerical amount, a numerical amount of an order inducing the making of a monetary contribution, and a post-programmed numerical amount. The entry of the consecutive contributions or gifts further comprises immediate recordation thereof on the devices, and optionally further including the step of communicating the contribution or gift data to a card account processor for processing thereof.

22 Claims, 26 Drawing Sheets





US005620182A

United States Patent [19][11] **Patent Number:** 5,620,182**Rossides**[45] **Date of Patent:** Apr. 15, 1997

[54] **EXPECTED VALUE PAYMENT METHOD
AND SYSTEM FOR REDUCING THE
EXPECTED PER UNIT COSTS OF PAYING
AND/OR RECEIVING A GIVEN AMMOUNT
OF A COMMODITY**

4,815,741 3/1989 Small 273/138 A
4,859,590 8/1989 Jolliff 273/138 A
4,948,134 8/1990 Suttle et al. 273/274
5,085,435 2/1992 Rossides 273/138 A
5,269,521 12/1993 Rossides 273/138 A

[76] **Inventor:** Michael T. Rossides, 3666 Upton St.,
NW., Washington, D.C. 20008

FOREIGN PATENT DOCUMENTS

2123702 2/1984 United Kingdom 273/138 A

[21] **Appl. No.:** 165,676

Primary Examiner—Benjamin H. Layno

[22] **Filed:** Dec. 13, 1993

[57] **ABSTRACT****Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 804,479, Dec. 13, 1991,
Pat. No. 5,269,521, which is a continuation-in-part of Ser.
No. 609,063, Nov. 7, 1990, Pat. No. 5,085,435, which is a
continuation-in-part of Ser. No. 571,126, Aug. 22, 1990,
abandoned.

Disclosed is an Expected Value Payment Method for the purpose of reducing the expected per unit costs incurred in paying and/or receiving a given amount of a commodity. An Expected Value Payment Method uses a random number supplier to decide bets that can reduce expected per unit costs in two ways. First, expected per unit costs can be reduced for the payer and/or receiver of a commodity by giving the receiver a chance to win a greater amount of the commodity than a given amount, the greater amount having a lower per unit cost than the given amount which was originally to be paid and received. Second, a probabilistic sorting method and system is disclosed allowing businesses to offer customers who bet to win a given amount of a commodity a better expected price for that amount than the price offered to customers paying conventionally. Also disclosed are Expected Value Payment Execution Methods and Systems that make an Expected Value Payment Method practical in the marketplace and methods and systems for preventing cheating in expected value payment bets.

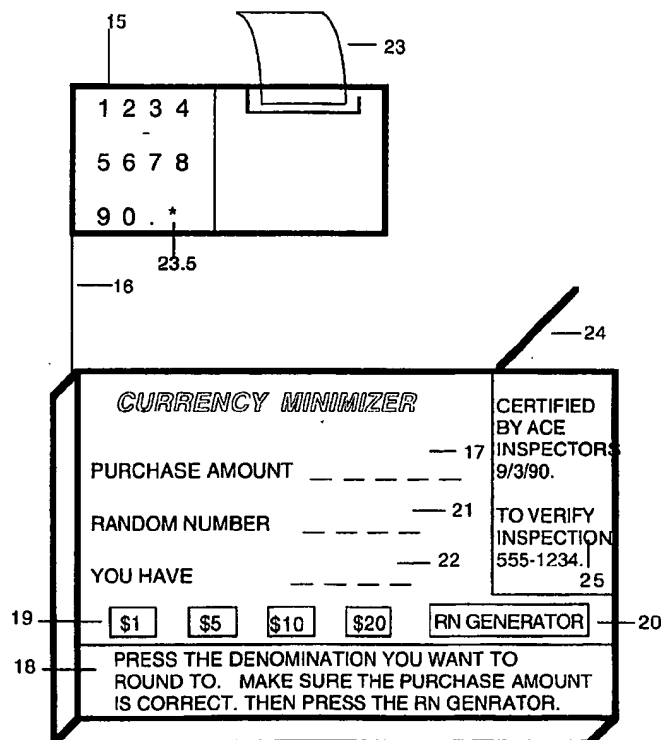
[51] **Int. Cl.⁶** A63F 9/00; G06F 17/60

[52] **U.S. Cl.** 273/138.2; 463/25; 364/412;
395/214; 395/216

[58] **Field of Search** 273/138 A, 138 R,
273/460, 138.2; 364/412, 405; 194/211,
219, 230, 292; 463/25

[56] **References Cited****U.S. PATENT DOCUMENTS**

3,770,269 11/1973 Elder 273/138 A
3,852,576 12/1974 Rudd 273/138 A
4,206,920 6/1980 Weatherford 373/138 A

2 Claims, 15 Drawing Sheets



US005592378A

United States Patent [19]**Cameron et al.**[11] **Patent Number:** **5,592,378**[45] **Date of Patent:** **Jan. 7, 1997**[54] **COMPUTERIZED ORDER ENTRY SYSTEM
AND METHOD**

[75] **Inventors:** Paul S. Cameron, Minneapolis; John C. Nash, Shoreview; Robert C. Bloomer, Little Canada; Robert E. Wollan, Minneapolis; Kelly M. Kreutter, Minnetonka; Melinda A. Ahler Olmstead, Shoreview; Dale H. Renner, Edina; Ryan D. Bourne, Eden Prairie; Keith M. Carnish, Minneapolis; Dean R. Jones, St. Louis Park, all of Minn.

[73] **Assignee:** Andersen Consulting LLP, Chicago, Ill.

[21] **Appl. No.:** 293,470

[22] **Filed:** Aug. 19, 1994

[51] **Int. Cl.⁶** G06F 153/00

[52] **U.S. Cl.** 395/227; 395/228

[58] **Field of Search** 364/401, 403,
364/407, 408

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,490,810	12/1984	Hon	364/410
4,734,858	3/1988	Schlaflly	364/408
4,775,935	10/1988	Yourick	364/401

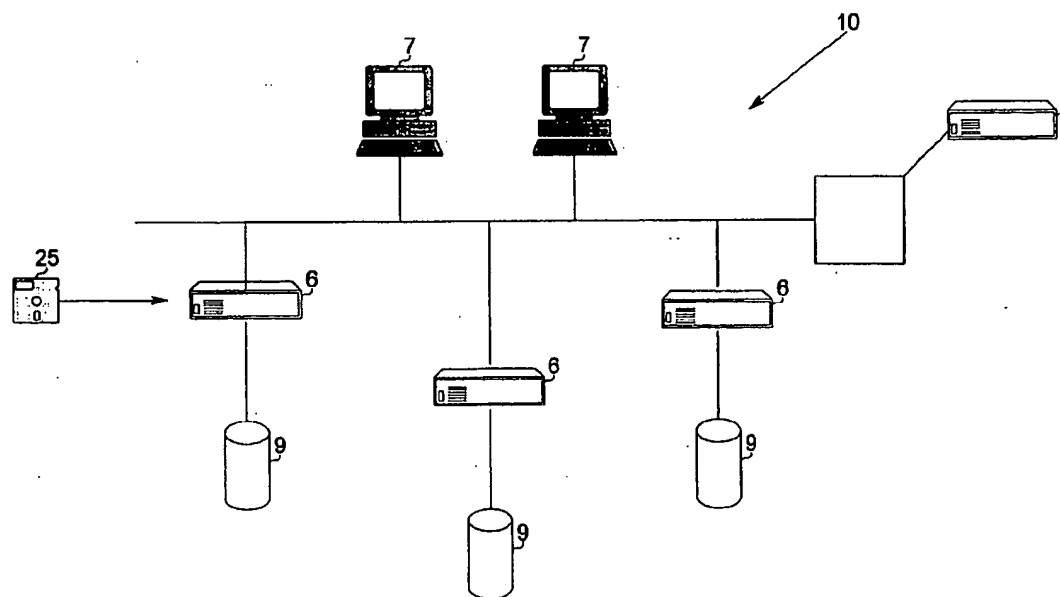
4,803,348	2/1989	Lohrey et al.	235/381
4,887,208	12/1989	Schneider et al.	364/403
4,992,940	2/1991	Dworkin	364/401
5,146,404	9/1992	Calloway et al.	364/401
5,168,445	12/1992	Kawashima et al.	364/403
5,241,464	8/1993	Greulich et al.	364/401
5,283,731	2/1994	Lalonde et al.	364/401
5,309,355	5/1994	Lockwood	364/401

Primary Examiner—Donald E. McElheny, Jr.

Attorney, Agent, or Firm—Merchant, Gould, Smith, Edell, Welter & Schmidt, P.A.

[57] **ABSTRACT**

A computerized order entry system for the placement of an order by a user via a terminal having a display is disclosed. The system includes a data capture mechanism for capturing order information and a storage device for storing the order information captured through the data capture mechanism. The system also provides a user interface for providing the user with access to a plurality of buttons representing a plurality of corresponding order entry functions. Each button is associated with an order entry function window having at least one data capture field into which order information related to the corresponding function may be captured. The user interface includes a mechanism for automatically routing the user to a particular order entry function window upon selection of the associated button. With such a configuration, placement of the order is substantially user-driven.

48 Claims, 41 Drawing Sheets



US005269521A

United States Patent [19][11] **Patent Number:** **5,269,521****Rossides**[45] **Date of Patent:** **Dec. 14, 1993**

- [54] **EXPECTED VALUE PAYMENT METHOD AND SYSTEM FOR REDUCING THE EXPECTED PER UNIT COSTS OF PAYING AND/OR RECEIVING A GIVEN AMOUNT OF A COMMODITY**

5,085,435 2/1992 Rossides 273/138 A

FOREIGN PATENT DOCUMENTS

2123702 2/1984 United Kingdom 273/138 A

Primary Examiner—Benjamin H. Layno

- [76] **Inventor:** Michael T. Rossides, 3666 Upton St., NW., Washington, D.C. 20008

- [21] **Appl. No.:** 804,479

- [22] **Filed:** Dec. 13, 1991

Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 609,063, Nov. 7, 1990, Pat. No. 5,085,435, which is a continuation-in-part of Ser. No. 571,126, Aug. 22, 1990, abandoned.

- [51] **Int. Cl.⁵** A63F 9/00; G06F 15/28

- [52] **U.S. Cl.** 273/138 R; 273/460; 364/412; 364/405; 902/23

- [58] **Field of Search** 273/128 R, 138 A; 364/412, 405; 194/211, 219, 230, 292

- [56] **References Cited**

U.S. PATENT DOCUMENTS

3,770,269 11/1973 Elder 273/138 A
 3,852,576 12/1974 Rudd 273/138 A
 4,206,920 6/1980 Weatherford 273/138 A
 4,815,741 3/1989 Small 273/138 A
 4,859,590 8/1989 Jolliff 273/138 A
 4,948,134 8/1990 Suttle et al. 273/274

[57] **ABSTRACT**

Disclosed is an Expected Value Payment Method for the purpose of reducing the expected per unit costs incurred in paying and/or receiving a given amount of a commodity. An Expected Value Payment Method uses a random number supplier to decide bets that can reduce expected per unit costs in two ways. First, expected per unit costs can be reduced for the payer and/or receiver of a commodity by giving the receiver a chance to win a greater amount of the commodity than a given amount, the greater amount having a lower per unit cost than the given amount which was originally to be paid and received. Second, in special situations, certain businesses can offer customers who bet to win a given amount of a commodity a better expected price for that amount than the price offered to customers paying conventionally for that same amount. Also disclosed are Expected Value Payment Execution Methods and Systems that make an Expected Value Payment Method practical in the marketplace and methods and systems for preventing cheating in expected value payment bets.

2 Claims, 14 Drawing Sheets